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S T A N D A R D S

Digital Video Subcommittee

AMERICAN NATIONAL STANDARD

ANSI/SCTE 193-2 2020

**MPEG-4 AAC Family Audio System – Part 2
Constraints for Carriage over MPEG-2 Transport**

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1. Introduction

1.1. Scope

This document describes the carriage of MPEG-4 AAC, HE AAC, HE AAC v2, and Extended HE-AAC (referred to collectively in this document as the “AAC family”) profile audio in MPEG-2 transport systems. It also discusses MPEG-2 AAC LC profile audio, which is closely related to MPEG-4 AAC profile audio.

The descriptor necessary to signal AAC family audio and information for signaling mixing of main and associated services in the receiver are defined in this document. Multiplexing and transport for cable using MPEG-2 systems are defined in SCTE 54 [10]. Coding constraints for AAC family audio elementary streams are defined in SCTE 193-1 [1].

2. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. All documents are subject to revision; and while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below, they are reminded that newer editions of those documents might not be compatible with the referenced version.

2.1. SCTE References

- [1] SCTE 193-1 2019, MPEG-4 AAC Family Audio System – Part 1, Coding Constraints for Cable Television

2.2. Standards from Other Organizations

- [2] ISO/IEC 13818-1:2018, Information technology – Generic coding of moving pictures and associated audio information: Systems
- [3] ISO/IEC 13818-7:2006, Information technology – Generic coding of moving pictures and associated audio information – Part 7: Advanced Audio Coding (AAC)
- [4] ISO/IEC 14496-3:2009, Information technology – Coding of audio-visual objects – Part 3: Audio
- [5] ISO/IEC 14496-3:2009/Amendment 4:2013: Information technology – Coding of audio-visual objects – Part 3: Audio, Amendment 4: New levels for AAC
- [6] ISO 639-2:1998, Codes for the representation of names of languages – Part 2: Alpha-3 code
- [7] ISO/IEC 8859-1:1998, Information technology – 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1
- [8] ISO/IEC 10646:2012, Information technology – Universal coded Character Set (UCS)

- [9] ISO/IEC 23003-3:2020: Information technology – MPEG audio technologies – Part 3: Unified speech and audio coding

2.3. Published Materials

- No normative references are applicable.

3. Informative References

The following documents might provide valuable information to the reader but are not required when complying with this document.

3.1. SCTE References

- [10] ANSI/SCTE 54, Digital Video Service Multiplex and Transport System Standard for Cable Television

3.2. Standards from Other Organizations

- [11] ARIB STD-B32 Part 2, Video Coding, Audio Coding and Multiplexing Specifications for Digital Broadcasting, Part 2, Audio Signal and Coding System
- [12] ETSI EN 300 468 V1.15.1 (2016-03), "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems"
- [13] ETSI TS 101 154 V2.5.1 (2019-01), "Digital Video Broadcasting (DVB); Specification for the use of Video and Audio Coding in Broadcast and Broadband Applications"

3.3. Published Materials

- No informative references are applicable.

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5. Abbreviations and Definitions

5.1. Abbreviations

AAC	advanced audio coding
ADTS	audio data transport stream
AU	access unit
bslbf	bit string, left bit first, where "left" is the order in which bit strings are written in this standard
Extended HE-AAC	extended high efficiency advanced audio coding
HE AAC	high efficiency advanced audio coding
HE AAC v2	high efficiency advanced audio coding version 2
ISBE	International Society of Broadband Experts
LATM	low overhead audio transport multiplex
LOAS	low overhead audio stream
PES	packetized elementary stream
PMT	program map table
PSI	program specific information
PNS	perceptual noise substitution
PTS	presentation time stamp
RAP	random access point
SCTE	Society of Cable Telecommunications Engineers
STD	system target decoder
TS	transport stream
uimsbf	unsigned integer, most significant bit first
USAC	unified speech and audio coding